

ABSTRACT OF THE INVENTION

[68] A method and apparatus are disclosed for identifying a winner in a bingo game. Players may obtain bingo cards from point-of-sale (POS) terminals that physically prints bingo cards for players in an embodiment where the player appears in person to purchase tickets, or from point-of-sale (POS) terminals that permit players to play bingo in an on-line environment. A game processor maintains a linked list identifying each card in play containing each possible value. Each entry in a linked list includes a pointer to the next element in the linked list. Each bingo card is represented as a bitmap containing an entry corresponding to each square on the bingo card. Each entry in the linked list also identifies the particular square on the bingo card containing the corresponding value, thereby allowing the appropriate entry in the corresponding bitmap to be identified. As each number is drawn, the game processor utilizes the linked list to identify all of the bingo cards in play having the drawn number. As each card containing the drawn number is identified, the corresponding entry in the bitmap is marked. Each possible winning pattern in a bingo game is likewise represented as a bitmap. If a bit in the winning bitmap is set to a value of 1, then the corresponding square must be set on a player's bingo card in order to match the pattern. Winning players are identified by comparing the card bitmap to each of the possible winning bitmaps. If all the 1's that are set in any bitmap for a winning pattern are also set in the card bitmap, then the card is a winning card.